

Remarks

Applicants thank Examiner Consilvio and Examiner Dunn for the courtesy of a personal interview on April 4, 2006. The outstanding Office Action, U.S. Patent Application Publication No. 2002/0176166 to Schuster, and U.S. Patent Application Publication No. 2002/0167727 to Hansen *et al.* were discussed in the interview. Claim 1 of the present application was discussed. Applicants argued that none of the cited references, either individually or in combination, teach the elements of the claimed invention.

A Russian language patent, RU 2166819, cited by the Applicants in an Information Disclosure Statement dated December 19, 2005, was discussed briefly. The Examiners indicated that they would obtain an English language translation of the reference, and forward the translation to Applicants. Applicants received the translation.

Claim Rejections - 35 U.S.C. § 103(a)

The Final Office Action rejects claims 18-23, 26 and 28-32 as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0176166 to Schuster ("Schuster") in view of U.S. Patent Application Publication No. 2002/0167727 to Hansen *et al.* ("Hansen") and in further view of one of U.S. Patent Application Publication No. 2003/0223670 to Nikolov *et al.* ("Nikolov"), U.S. Patent Application Publication No. 2003/0227678 to Lines *et al.* ("Lines"), U.S. Patent Application Publication No. 2004/0008310 to Leidig *et al.* ("Leidig"), or U.S. Patent Application Publication No. 2005/0146789 to Wegmann *et al.* ("Wegmann"). Applicants respectfully traverse this rejection.

None of the references, either alone or combined, teach the claimed invention.

Moreover, the Office Action does not point to or otherwise provide the necessary motivation for the combination of the cited references. For example, the combination of references fails to teach or suggest the now-claimed feature: "wherein the array of elements are radially arranged in a circular pattern around the optical axis of the polarizer and divided into groups of parallel elements to polarize incident UV light and output tangentially polarized light, with respect to the cylindrical symmetry of the polarizer, toward the mask." (Amended claim 18.)

Primary Reference

As the Office Action concedes that Schuster does not teach the claimed invention. For example, Schuster does not disclose an array of wire elements on the substrate having the claimed configuration. OA at page 3 ("Schuster does not expressly disclose an array of wire elements on the substrate; wherein the array of elements are radially arranged in a circular pattern around the optical axis of the polarizer and divided into groups of parallel elements to polarize incident UV light and output a tangentially polarized light, with respect to the cylindrical symmetry of the polarizer, toward the mask."). Moreover, Schuster does not teach or fairly suggest polarizing UV radiation. Instead, Schuster teaches a polarizer for producing a light beam that has a prescribed distribution of locally varying polarization states over its cross-section. Moreover, the polarizer disclosed in Schuster is not a wire grid polarizer.

Secondary References

None of the secondary references cure the deficiencies of the primary reference.

Hansen does not teach or suggest a wire grid polarizer for use in UV applications. Hansen simply discusses wire grid polarizers in a general fashion. Specifically, Hansen does not teach or suggest a wire grid polarizer wherein the elements are radially arranged in a circular pattern around the optical axis of the polarizer and divided into groups of parallel elements to polarize incident UV light and output tangentially polarized light, with respect to the cylindrical symmetry of the polarizer, toward the mask.

Nikolov also does not cure the deficiencies of Schuster or Hansen. Nikolov discloses an optical polarization beam combiner/splitter. A thin film wire grid structure is used, for example, to aid in coupling beams to fibers. An S polarized beam and a P polarized beam are received by the wire grid polarizer, which combines them to form a composite output beam. Nikolov does not teach or suggest a wire grid polarizer that produces tangentially polarized light.

Lines does not cure the deficiencies of Schuster or Hansen. Lines describes a corrosion resist and polarization device, such as a wire grid polarizer, for generally decoupling two orthogonal polarizations of electromagnetic waves within UV, visible and infrared. See, for example, page 1, paragraph [0008]. Lines does not teach or suggest a wire grid polarizer having the claimed wire configuration. Finally, Lines also does not teach or suggest a wire grid polarizer that produces tangentially polarized light.

Leidig also does not cure the deficiencies of Schuster or Hansen. Leidig describes an apparatus and method for processing substrate materials using light exposure energy and more particularly relates to apparatus and methods for alignment of a liquid crystal display compensation film provided as a web-fed substrate. In fact, Leidig teaches away from using wire grid polarizers, stating "[h]owever, wire grid

polarization devices are not dimensionally scaled to suit the requirements of applying polarized light over a large exposure zone." (Leidig at page 3, paragraph [0031]).

Wegmann does not cure the deficiencies of Schuster or Hansen. Wegmann relates to a device for polarization specific examination of an optical system, having a detector part that comprises a polarization detector means for recording the exit state of polarization of radiation emerging from the optical systems to an optical imaging system having such a device, and to an associated calibration system. Wegmann contains no mention of a wire grid polarizer.

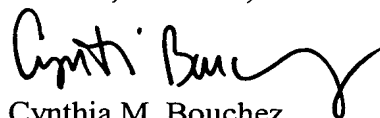
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Cynthi Bouchez", with a stylized flourish at the end.

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